## SEQUENCE LISTING

```
<110> Forschungszentrum Juelich GmbH
<120> Method for Microbial Production of L-Serine
<130> 23369
<140>
<141>
<160> 6
<170> PatentIn Ver. 2.1
<210> 1
<211> 1449
<212> DNA
<213> Corynebacterium glutamicum
<400> 1
tcgtgcaact tcagactctt acggaggcga tggaccaaaa acaactacaa tcaagcagat 60
caccttgtac accaccatag aaaaggccca ccctcagcca tggctatcag tgttgttgat 120
ctatttagca tcggtatcgg accatcatcc tcacataccg tcggccccat gagagccgcc 180
ctcacqtata tctctqaatt tcccaqctcq catqtcqata tcacqttqca cqqatccctt 240
gccgccaccg gtaaaggcca ctgcactgac cgggcggtat tactgggtct ggtgggatgg 300
gaaccaacga tagttcccat tgatgctgca ccctcacccg gcgcgccgat tcctgcgaaa 360
ggttctgtga acgggccaaa gggaacggtg tcgtattccc tgacgtttga tcctcatcct 420
cttccagaac accccaatgc cgttaccttt aaaggatcaa ccacaaggac ttatttgtcg 480
gtgggtggtg ggttcattat gacgttggag gatttccgga agctggacga tatcggatca 540
ggtgtgtcaa ccattcatcc agaggcagag gtgccttgtc cttttcagaa gagttcccaa 600
ttactcgcat atggtcgcga ttttgcggag gtcatgaagg ataatgagcg cttaatccac 660
ggggatettg geacagtgga tgeceatttg gategagtgt ggeagattat geaggagtge 720
gtggcacaag gcatcgcaac gccggggatt ttaccgggtg ggttgaatgt gcaacgtcgg 780
gcgccgcagg tacacgcgct gattagcaac ggggatacgt gtgagctggg tgctgatctt 840
gatgctgtgg agtgggtgaa tctgtacgcc ttggcggtga atgaagaaaa cgccgctggt 900
ggtcgtgtgg ttactgctcc gactaatggt gctgcgggga ttattccggc ggtgatgcac 960
tatgcgcggg attttttgac aggttttggg gcggagcagg cgcggacgtt tttgtatacc 1020
gcgggtgcgg tgggcatcat cattaaggaa aatgcctcga tctctggcgc ggaggtgggg 1080
tgtcagggtg aggttggttc agcgtccgcg atggcggctg ccgggttgtg tgcagtctta 1140
ggtggttctc cgcaacaggt ggaaaacgcc gcggagattg cgttggagca caatttggga 1200
ttgacgtgcg atccggtggg cgggttagtg cagattccgt gtattgaacg caacgctatt 1260
gctgccatga agtccatcaa tgcggcaagg cttgcccgga ttggtgatgg caacaatcgc 1320
gtgagtttgg atgatgtggt ggtcacgatg gctgccaccg gccgggacat gctgaccaaa 1380
tataaggaaa cgtcccttgg tggtttggca accaccttgg gcttcccggt gtcgatgacg 1440
gagtgttag
                                                                  1449
<210> 2
<211> 449
<212> PRT
<213> Corynebacterium glutamicum
<400> 2
Met Ala Ile Ser Val Val Asp Leu Phe Ser Ile Gly Ile Gly Pro Ser
 1
Ser Ser His Thr Val Gly Pro Met Arg Ala Ala Leu Thr Tyr Ile Ser
```

25

Glu	Phe	Pro 35	Ser	Ser	His	Val	Asp 40	Ile	Thr	Leu	His	Gly 45	Ser	Leu	Ala
Ala	Thr 50	Gly	Lys	Gly	His	Cys 55	Thr	Asp	Arg	Ala	Val 60	Leu	Leu	Gly	Leu
Val 65	Gly	Trp	Glu	Pro	Thr 70	Ile	Val	Pro	Ile	Asp 75	Ala	Ala	Pro	Ser	Pro 80
Gly	Ala	Pro	Ile	Pro 85	Ala	Lys	Gly	Ser	Val 90	Asn	Gly	Pro	Lys	Gly 95	Thr
Val	Ser	Tyr	Ser 100	Leu	Thr	Phe	Asp	Pro 105	His	Pro	Leu	Pro	Glu 110	His	Pro
Asn	Ala	Val 115	Thr	Phe	Lys	Gly	Ser 120	Thr	Thr	Arg	Thr	Tyr 125	Leu	Ser	Val
Gly	Gly 130	Gly	Phe	Ile	Met	Thr 135	Leu	Glu	Asp	Phe	Arg 140	Lys	Leu	Asp	Asp
Ile 145	Gly	Ser	Gly	Val	Ser 150	Thr	Ile	His	Pro	Glu 155	Ala	Glu	Val	Pro	Cys 160
Pro	Phe	Gln	Lys	Ser 165	Ser	Gln	Leu	Leu	<b>Ala</b> 170	Tyr	Gly	Arg	Asp	Phe 175	Ala
Glu	Val	Met	<b>Lys</b> 180	Asp	Asn	Glu	Arg	Leu 185	Ile	His	Gly	Asp	Leu 190	Gly	Thr
Val	Asp	Ala 195	His	Leu	Asp	Arg	Val 200	Trp	Gln	Ile	Met	Gln 205	Glu	Cys	Val
Ala	Gln 210	Gly	Ile	Ala	Thr	Pro 215	Gly	Ile	Leu	Pro	Gly 220	Gly	Leu	Asn	Val
G1n 225	Arg	Arg	Ala	Pro	Gln 230	Val	His	Ala	Leu	11e 235	Ser	Asn	Gly	Asp	Thr 240
Cys	Glu	Leu	Gly	Ala 245	Asp	Leu	Asp	Ala	Val 250	Glu	Trp	Val	Asn	Leu 255	Tyr
Ala	Leu	Ala	Val 260	Asn	Glu	Glu	Asn	Ala 265	Ala	Gly	Gly	Arg	Val 270	Val	Thr
Ala	Pro	Thr 275	Asn	Gly	Ala	Ala	Gly 280	Ile	Ile	Pro	Ala	Val 285	Met	His	Tyr
Ala	Arg 290	Asp	Phe	Leu	Thr	Gly 295	Phe	Gly	Ala	Glu	Gln 300	Ala	Arg	Thr	Phe
Leu 305	Tyr	Thr	Ala	Gly	Ala 310	Val	Gly	Ile	Ile	11e 315	Lys	Glu	Asn	Ala	Ser 320
Ile	Ser	Gly	Ala	Glu 325	Val	Gly	Cys	Gln	Gly 330	Glu	Val	Gly	Ser	Ala 335	Ser
Ala	Met	Ala	Ala 340	Ala	Gly	Leu	Cys	Ala 345	Val	Leu	Gly	Gly	Ser 350	Pro	Gln

Gln	Val	G1u 355	Asn	Ala	Ala	Glu	11e 360	Ala	Leu	Glu	His	Asn 365	Leu	Gly	Leu		
Thr	Cys 370	Asp	Pro	Val	Gly	Gly 375	Leu	Val	Gln	Ile	Pro 380	Cys	Ile	Glu	Arg		
<b>Asn</b> 385	Ala	Ile	Ala	Ala	Met 390	Lys	Ser	Ile	Asn	Ala 395	Ala	Arg	Leu	Ala	Arg 400		
Ile	Gly	Asp	Gly	Asn 405	Asn	Arg	Val	Ser	Leu 410	Asp	Asp	Val	Val	Val 415	Thr		
Met	Ala	Ala	Thr 420	Gly	Arg	Asp	Met	Leu 425	Thr	Lys	Tyr	Lys	Glu 430	Thr	Ser		
Leu	Gly	Gly 435	Leu	Ala	Thr	Thr	Leu 440	Gly	Phe	Pro	Val	Ser 445	Met	Thr	Glu		
Cys																	
4010																	
<210		3															
<211> 18 <212> DNA																	
<212> DNA <213> Corynebacterium glutamicum																	
<400> 3																	
tegtgeaact teagacte														18			
	,,,,,																
<210	)> 4	4															
<211	.> 3																
<212	?> I	DNA															
<213	3> (	Cory	ebac	cteri	ium c	gluta	amicı	1m									
<400	<400> 4																
cccatccact aaacttaaac acgtcataat gaacccacc															39		
<210	> 5	5															
<211	.> 3	39															
<212	?> I	ANC															
<213	3> (	Cory	ebac	cteri	ium c	<b>jlut</b> a	amicı	ım									
<400	<400> 5																
tgtt	taaq	gtt t	tagto	ggate	gg go	cgac	ctaat	t ggt	gctg	gcg							39
<210	> (	6															
<211	.> 1	18															
<212		ANC															
<213	3> (	Cory	ebac	cteri	ium c	gluta	amicı	ım									
<400	> (	6															
cggg	raago	ccc a	aaggt	ggt													18